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EXAMINER

PEFFLEY, MICHAEL F

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/698,026
Filing Date: October 30, 2003
Appellant(s): HALL ET AL.

Peter C. Maki
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed March 10, 2010 appealing from the Office action mailed February 9, 2009.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 16-22 stand rejected.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

6,059,778	SHERMAN	5-2000
5,971,980	SHERMAN	10-1999

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 16, 17, and 19-22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sherman (U.S. Pat. No. 6,059,778).

Regarding claim 16, Sherman discloses a system for delivering RF energy to an endocardial tissue, the system comprising:

a catheter 30 having one or more electrodes 32, 36 proximate a distal end of the catheter, the catheter configured for being positioned such that the one or more electrodes are adjacent the endocardial tissue (Fig. 1), at least one of the electrodes including a tip electrode 36; and

a power control system 20 configured to provide power to the tip electrode (inherently capable of this intended use), the power having a plurality of alternating on

portions and off portions, one set of adjacent on and off portions defining a duty cycle (col. 3, In. 37-38 and col. 7, In. 41-43, 63-67);

wherein the power control system delivers an energy pulse of between approximately 0.01 ms to 4 ms (col. 7, In. 44-52) via the tip electrode 36, and the on portions and off portions of the duty cycle have a ratio of between 50% - 100% (col. 7, In. 44-52).

The claim further calls for the tip electrode to have a thermal time constant of approximately 240 ms. Since the ring electrodes 32 of Sherman comprise platinum (col. 6, In. 36-41), it would have been obvious, if not inherent, to have the tip electrode 36 also comprise platinum. Sherman further discloses that the tip electrode has a diameter of 2.3 mm, which is equal to 0.091 inches (col. 6, In. 52-53). Since the tip electrode of Sherman comprises platinum and practically has the exact same diameter (0.091 inches vs. 0.094 inches) as the platinum tip of applicant's device, it would have been obvious, if not inherent, for the electrode tip of Sherman to have a thermal time constant of approximately 240 ms.

Furthermore, applicant has not disclosed any criticality or unexpected result associated with having a thermal time constant of approximately 240 ms, since applicant discloses that the claimed system applies to "almost any electrode for RF ablation" (specification pg. 8, In. 10-11).

Regarding claims 17 and 21, Sherman discloses the system of claim 16, wherein the duty cycle chosen ranges from 80% to 100%. The device of Sherman is inherently

capable of operating at a duty cycle of 80% to 100%. In addition, applicant has not disclosed any criticality or unexpected result associated with this limitation.

Regarding claim 19, Sherman discloses the system of claim 16, wherein the RF energy has a period of between 120 ms and 240 ms. The device of Sherman is inherently capable of operating as claimed. In addition, applicant has not disclosed any criticality or unexpected result associated with this limitation.

Regarding claim 20, Sherman discloses the system of claim 16, wherein the RF energy has a period of greater than 240 ms. The device of Sherman is inherently capable of operating as claimed. In addition, applicant has not disclosed any criticality or unexpected result associated with this limitation.

Regarding claim 22, Sherman discloses the system of claim 16, wherein one of the one or more electrodes includes a ring electrode 32 (Fig. 1).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman ('778).

Regarding claim 18, Sherman discloses the system of claim 16. Sherman, however, does not expressly disclose that the platinum tip electrode includes an approximately 5 mm tip with a diameter of approximately 0.094 inches.

At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to make the platinum tip electrode

of Sherman have an approximately 5 mm tip with a diameter of approximately 0.094 inches because applicant has not disclosed that making the platinum tip electrode to include an approximately 5 mm tip with a diameter of approximately 0.094 inches provides an advantage, is used in a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with either the approximate dimensions of Sherman or the claimed approximate dimensions because on page 8, lines 10-11 of the specification, applicant states that the present system applies to almost any electrode for RF ablation.

Claims 16-22 are-rejected under 35 U.S.C. 103(a) as being unpatentable over Sherman ('778) in view of Sherman (U.S. Pat. No. 5,971,980).

Regarding claim 16, see. the previous rejection of claim 16. Sherman ('778) discloses a tip electrode 36 (col. 6, ln. 19-20 and Fig. 1) but does not expressly disclose that it delivers RF energy. Sherman ('980), however, discloses an analogous ablation probe comprising a ring electrode 26 and a tip electrode 22, which both deliver RF energy to tissue (col. 4, ln. 1-10 and Figs. 1 and 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have delivered RF energy from the tip electrode of Sherman ('788) in view of the teaching of Sherman ('980) as an obvious way of using a tip electrode that is well-known in the art.

Regarding claims 17-22, see the preceding rejections of claims 17-22.

(10) Response to Argument

Regarding the anticipatory/obviousness rejection of claims 16, 17 and 19-22, the examiner maintains that the tip electrode of Sherman ('778) would inherently, or at least obviously, be used in the same capacity as the remaining band electrodes. The Sherman specification indicates at column 6, lines 16-28 that the device may be provided with a tip electrode, as well as various other configurations for the band electrodes. There is no disclosure of an alternative use for the tip electrode, such as sensing or mapping. It is clear that the tip electrode would be used in the same capacity as the band electrodes, or at least that those of ordinary skill in the art would recognize that it would be used as such. That Sherman chooses not to explicitly disclose an alternative use for the tip electrode is believed to support the examiner's assertion that it would inherently be used in the same capacity.

Regarding the obviousness rejection of the claims based on Sherman ('778) in view of Sherman ('980), the examiner maintains that Sherman ('980) discloses a substantially identical device and specifically teaches the tip electrode is connected to the RF energy source for treating tissue. See column 4, lines 1-10 and Figures 1 and 2 of the Sherman ('980) patent. The examiner maintains that one of ordinary skill in the art would clearly be motivated to use the tip electrode of Sherman ('778) for delivering RF energy based on this teaching of Sherman ('980).

Applicant has not posited any argument as to why such a combination is not tenable, nor renders the claims obvious. Applicant merely asserts that certain features are not shown. Regarding the limitation directed to the thermal time constant of the

electrode, the examiner has addressed this issue in the Final Office action of February 9, 2009, which rejections are repeated in the Grounds of Rejection section above. Sherman ('778) discloses an electrode made from the same material (i.e. platinum) with the same dimensions and would inherently, or at least obviously, possess the same thermal time constant. Again, there is no criticality or unexpected result associated with the claimed thermal time constant and the examiner maintains this feature is clearly shown, or would at least be within an obvious range of the claimed thermal time constant.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Michael Peffley/
Primary Examiner, Art Unit 3739

Conferees:

/Linda C Dvorak/

Supervisory Patent Examiner, Art Unit 3739

/Tom Hughes/

TQAS, TC 3700